

OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/880,503

DATE: 06/28/2001  
TIME: 14:56:06

Input Set : A:\9596-331.app  
Output Set: N:\CRF3\06282001\I880503.raw

3 <110> APPLICANT: CINES, Douglas B  
 4 HIGAZI, Abd Al-Roof  
 6 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND  
 7 TISSUE CONTRACTABILITY  
 9 <130> FILE REFERENCE: 9596-331  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/880,503  
 C--> 12 <141> CURRENT FILING DATE: 2001-06-13  
 14 <150> PRIOR APPLICATION NUMBER: US 60/212,847  
 15 <151> PRIOR FILING DATE: 2000-06-20  
 17 <160> NUMBER OF SEQ ID NOS: 18  
 19 <170> SOFTWARE: PatentIn Ver. 2.1  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 88  
 23 <212> TYPE: PRT  
 24 <213> ORGANISM: Homo sapiens  
 26 <400> SEQUENCE: 1  
 27 Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser  
 28 1 5 10 15  
 30 Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val  
 31 20 25 30  
 33 Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly  
 34 35 40 45  
 36 Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro  
 37 50 55 60  
 39 Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met  
 40 65 70 75 80  
 42 Val His Asp Cys Ala Asp Gly Lys  
 43 85  
 46 <210> SEQ ID NO: 2  
 47 <211> LENGTH: 47  
 48 <212> TYPE: PRT  
 49 <213> ORGANISM: Homo sapiens  
 51 <400> SEQUENCE: 2  
 52 Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
 53 1 5 10 15  
 55 Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn  
 56 20 25 30  
 58 Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser  
 59 35 40 45  
 62 <210> SEQ ID NO: 3  
 63 <211> LENGTH: 411  
 64 <212> TYPE: PRT  
 65 <213> ORGANISM: Homo sapiens  
 67 <400> SEQUENCE: 3  
 68 Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
 69 1 5 10 15  
 71 Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn

**ENTERED**

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/880,503

DATE: 06/28/2001  
TIME: 14:56:06

Input Set : A:\9596-331.app  
Output Set: N:\CRF3\06282001\I880503.raw

72               20               25               30  
74 Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys  
75               35               40               45  
77 Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr  
78               50               55               60  
80 Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu  
81               65               70               75               80  
83 Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu  
84               85               90               95  
86 Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp  
87               100              105              110  
89 Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val  
90               115              120              125  
92 His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro Pro Glu Glu Leu  
93               130              135              140  
95 Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys Ile Ile  
96               145              150              155              160  
98 Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala Ala Ile  
99               165              170              175  
101 Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys Gly Gly Ser  
102               180              185              190  
104 Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile Asp  
105               195              200              205  
107 Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser Arg Leu  
108               210              215              220  
110 Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu Ile  
111               225              230              235              240  
113 Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn Asp Ile  
114               245              250              255  
116 Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro Ser  
117               260              265              270  
119 Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp Pro Gln  
120               275              280              285  
122 Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu Asn Ser Thr  
123               290              295              300  
125 Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val Lys Leu Ile  
126               305              310              315              320  
128 Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu Val Thr  
129               325              330              335  
131 Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp Ser Cys  
132               340              345              350  
134 Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly Arg Met  
135               355              360              365  
137 Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys Asp  
138               370              375              380  
140 Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile Arg  
141               385              390              395              400  
143 Ser His Thr Lys Glu Glu Asn Gly Leu Ala Leu  
144               405              410

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/880,503

DATE: 06/28/2001  
TIME: 14:56:06

Input Set : A:\9596-331.app  
Output Set: N:\CRF3\06282001\I880503.raw

147 <210> SEQ ID NO: 4  
148 <211> LENGTH: 135  
149 <212> TYPE: PRT  
150 <213> ORGANISM: Homo sapiens  
152 <400> SEQUENCE: 4  
153 Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
154 1 5 10 15  
156 Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn  
157 20 25 30  
159 Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys  
160 35 40 45  
162 Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr  
163 50 55 60  
165 Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu  
166 65 70 75 80  
168 Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu  
169 85 90 95  
171 Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp  
172 100 105 110  
174 Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val  
175 115 120 125  
177 His Asp Cys Ala Asp Gly Lys  
178 130 135  
181 <210> SEQ ID NO: 5  
182 <211> LENGTH: 276  
183 <212> TYPE: PRT  
184 <213> ORGANISM: Homo sapiens  
186 <400> SEQUENCE: 5  
187 Lys Pro Ser Ser Pro Pro Glu Leu Lys Phe Gln Cys Gly Gln Lys  
188 1 5 10 15  
190 Thr Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile  
191 20 25 30  
193 Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly  
194 35 40 45  
196 Ser Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val  
197 50 55 60  
199 Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr  
200 65 70 75 80  
202 Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu  
203 85 90 95  
205 Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala  
206 100 105 110  
208 Asp Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser  
209 115 120 125  
211 Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys  
212 130 135 140  
214 Leu Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile  
215 145 150 155 160  
217 Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/880,503

DATE: 06/28/2001  
TIME: 14:56:06

Input Set : A:\9596-331.app  
Output Set: N:\CRF3\06282001\I880503.raw

218	165	170	175	
220	Leu Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln			
221	180	185	190	
223	Pro His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala			
224	195	200	205	
226	Asp Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro			
227	210	215	220	
229	Leu Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser			
230	225	230	235	240
232	Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg			
233	245	250	255	
235	val Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn			
236	260	265	270	
238	Gly Leu Ala Leu			
239	275			
242	<210> SEQ ID NO: 6			
243	<211> LENGTH: 403			
244	<212> TYPE: PRT			
245	<213> ORGANISM: Homo sapiens			
247	<400> SEQUENCE: 6			
248	Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly			
249	1 5 10 15			
251	Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn			
252	20 25 30			
254	Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys			
255	35 40 45			
257	Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr			
258	50 55 60			
260	Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu			
261	65 70 75 80			
263	Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu			
264	85 90 95			
266	Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp			
267	100 105 110			
269	Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val			
270	115 120 125			
272	His Asp Cys Ala Asp Gly Lys Leu Lys Phe Gln Cys Gly Gln Lys Thr			
273	130 135 140			
275	Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu			
276	145 150 155 160			
278	Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser			
279	165 170 175			
281	Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile			
282	180 185 190			
284	Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile			
285	195 200 205			
287	Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met			
288	210 215 220			
290	Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp			

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/880,503

DATE: 06/28/2001

TIME: 14:56:06

Input Set : A:\9596-331.app

Output Set: N:\CRF3\06282001\I880503.raw

291	225	230	235	240
293	Thr Leu Ala His His Asn Asp Ile Ala Leu	Leu Lys Ile Arg Ser Lys		
294	245	250	255	
296	Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile	Gln Thr Ile Cys Leu		
297	260	265	270	
299	Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly	Thr Ser Cys Glu Ile Thr		
300	275	280	285	
302	Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu	Tyr Pro Glu Gln Leu		
303	290	295	300	
305	Lys Met Thr Val Val Lys Leu Ile Ser His Arg	Glu Cys Gln Gln Pro		
306	305	310	315	320
308	His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met	Leu Cys Ala Ala Asp		
309	325	330	335	
311	Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp	Ser Gly Gly Pro Leu		
312	340	345	350	
314	Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr	Gly Ile Val Ser Trp		
315	355	360	365	
317	Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly	Val Tyr Thr Arg Val		
318	370	375	380	
320	Ser His Phe Leu Pro Trp Ile Arg Ser His Thr	Lys Glu Glu Asn Gly		
321	385	390	395	400
323	Leu Ala Leu			
327	<210> SEQ ID NO: 7			
328	<211> LENGTH: 323			
329	<212> TYPE: PRT			
330	<213> ORGANISM: Homo sapiens			
332	<400> SEQUENCE: 7			
333	Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys	Asp Cys Leu Asn Gly		
334	1	5	10	15
336	Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn	Ile His Trp Cys Asn		
337	20	25	30	
339	Cys Pro Lys Phe Gly Gly Gln His Cys Glu	Ile Asp Lys Ser Lys		
340	35	40	45	
342	Pro Ser Ser Pro Pro Glu Glu Leu Lys Phe Gln	Cys Gly Gln Lys Thr		
343	50	55	60	
345	Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu	Phe Thr Thr Ile Glu		
346	65	70	75	80
348	Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg	His Arg Gly Gly Ser		
349	85	90	95	
351	Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser	Pro Cys Trp Val Ile		
352	100	105	110	
354	Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys	Glu Asp Tyr Ile		
355	115	120	125	
357	Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn	Thr Gln Gly Glu Met		
358	130	135	140	
360	Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys	Asp Tyr Ser Ala Asp		
361	145	150	155	160
363	Thr Leu Ala His His Asn Asp Ile Ala Leu	Leu Lys Ile Arg Ser Lys		
364	165	170	175	

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/880,503

DATE: 06/28/2001  
TIME: 14:56:07

Input Set : A:\9596-331.app  
Output Set: N:\CRF3\06282001\I880503.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date